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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,033	10/24/2003	Jukka Henriksson	886A.0005.U1(US)	1753

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EXAMINER

BAYARD, EMMANUEL

ART UNIT	PAPER NUMBER
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2611

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/693,033

Applicant(s)

HENRIKSSON, JUKKA

Examiner

Emmanuel Bayard

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4, 6-8, 14-15, 20-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 4 recites the limitation "the time domain" in line 3. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 6 recites the limitation "the time domain" in line 2. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 7 recites the limitation "the time domain" in line 3. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 14 recites the limitation "the time domain" in line 2. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 15 recites the limitation "the time domain" in line 3. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 20 recites the limitation "the time domain" in line 3. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 21 recites the limitation "the time domain" in line 4. There is insufficient antecedent basis for this limitation in the claim.
10. Claim 8 is also rejected because it depends on a base rejected claim.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Stopler et al U.S. Pub No 20030043925 A1.

As per claims 1 and 17, Stopler et al teaches a method for receiving a multi-carrier signal, comprising the steps of: detecting a presence of at least one impulse interference within the signal, identifying one or more samples of said signal where a significant amount of the impulse noise caused by the at least one impulse interference is present (see figs. 1-2 elements 12, 14 and page 2, paragraph [0016] and page 3 [0029]-[0030]); selecting samples to be blanked (see fig.1 element 16 and page 3 [0031]); blanking the selected samples to obtain a signal with blanking (see fig.1 element 18 and page 3 [0032] and page 6 [0074-0077]); and determining an estimate of the signal with blanking (see figs. 1-2 elements 20 100 and page 3 [0032]); wherein the selected samples comprise the samples identified to have impulse interference present and at least one of the following: a first predetermined number of samples preceding the identified samples (see figs.1- element 68); and a second predetermined number of samples following the identified samples (see fig.1 element 72 and page 7 [0077]-

[0078]).

As per claim 2, Stopler et al Inherently teaches wherein the first predetermined number of samples is equal to the second predetermined number (see [0059]).

As per claims 3 and 18, Stopler et al teaches further comprising: defining a blanking window having a length selected from a plurality of different predetermined lengths and applying the blanking window to the signal so that one or more samples within the blanking window are blanked (see [0077]).

As per claim 4, Stopler et al Inherently teaches wherein the number of blanking windows is one and the predetermined length of the window is equal to or greater than three samples in the time domain (see [0077]).

As per claims 5 and 19, Stopler et al Inherently teaches wherein the selected length of the blanking window is the smallest one of the available lengths that is sufficient to encompass the selected samples.

As per claims 6 and 20, Stopler et al Inherently teaches wherein the selected blanking window is positioned in relation to the samples in the time domain so that at least one sample preceding the identified samples is within the blanking window.

As per claims 7 and 21, Stopler et al Inherently teaches, wherein a plurality of instances of the defined blanking window is applied in succession over the samples so that a first blanking window is positioned in relation to the samples in the time domain so that at least one sample preceding the identified samples is within the said first blanking window and at least one second blanking window is positioned so as to include at least one sample immediately succeeding the samples within the first blanking

window, wherein all the identified samples are within at least one of the first and second blanking windows.

As per claim 8, Stopler et al Inherently teaches, wherein two or more blanking windows are positioned so as to overlap.

As per claim 9, Stopler et al teaches, wherein the blanking window is non-rectangular (see fig.3).

As per claim 10, Stopler et al Inherently teaches A computer program comprising program instructions for causing an apparatus to perform the method of claim 1.

As per claim 11, Stopler et al teaches: a receiver for receiving a multi-carrier signal (see figs. 1-2 and page 3 [0029]); and a processor (see fig.1 element 8); wherein the processor is configured to: detect the presence of impulse interference in said signal; identify one or more samples of said signal where a significant amount of impulse noise is present (see figs. 1-2 elements 12, 14 and page 2, paragraph [0016] and page 3 [0029]-[0030]); select samples of said signal to be blanked (see fig.1 element 16 and page 3 [0031]); the selected samples including the identified samples and at least one of a first predetermined number of samples preceding the identified samples (see figs.1- element 68); and a second predetermined number of samples following the identified samples (see fig.1 element 72 and page 7 [0077]-[0078]); blank the selected samples to obtain a signal with blanking (see fig.1 element 18 and page 3 [0032] and page 6 [0074-0077]); and determine an estimate of the signal with blanking (see figs. 1-2 elements 20 100 and page 3 [0032]).

As per claim 12, Stopler et al teaches a blanking window having a length selected from a plurality of different predetermined lengths and applying the blanking window to the signal so that one or more samples within the blanking window are blanked (see [0077]).

As per claim 13, Stopler et al Inherently teaches, configured to select the smallest one of the predetermined lengths that is sufficient to encompass the selected samples.

As per claim 14, Stopler et al Inherently teaches, configured to position the selected blanking window in relation to the samples in the time domain so that at least one sample preceding the identified samples is within the blanking window.

As per claim 5, Stopler et al Inherently teaches configured to apply a plurality of instances of the defined blanking window in succession over the samples so that a first blanking window is positioned in relation to the samples in the time domain so that at least one sample preceding the identified samples is within the said first blanking window and at least one second blanking window is positioned so as to include at least one sample immediately succeeding the samples within the first blanking window, wherein all the identified samples are within at least one of the first and second blanking windows.

As per claim 16, Stopler et al teaches A communication system comprising a transmitter for transmitting a multi-carrier signal and an apparatus according to claim 10 for receiving said signal (see [0002]).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Whikehart U.S. Patent No 6,295,324 B1 teaches a signal quality.

Tsuji et al U.S. Patent No 6,385,261 B1 teaches an impulse noise detector.

Bonds U.S. Patent No 6,384,681 B1 teaches a swept performance monitor.

Schmidt et al U.S. Patent No 4,154,980 teaches a noise blanker.

Glazebrook U.S. Patent No 5,170,489 teaches a noise blanker.

Short et al U.S. Patent No 6,347,146 B1 teaches a noise reducing.

Guthrie U.S. Patent No 6,420,873 B1 teaches a MRI detector.

Bond U.S. Patent No 5,537,675 teaches a splatter controlling noise.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM)
Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571 272 2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Emmanuel Bayard
Primary Examiner
Art Unit 2611

1/12/07



EMMANUEL BAYARD
PRIMARY EXAMINER